

# Universal Web Access



Strategies for  
***Accessible*** Content

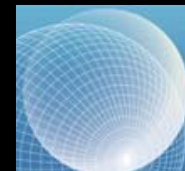
# ter·mi·nol·o·gy

- Constituents, Customers, Citizens, Users
  - Digital Government, e-Government
  - e-Business, e-Commerce
  - Web Site, Web Application
- 
- Business/Program Manager
  - IT/Technical Staff, Web Developer

# Internet Use Statistics

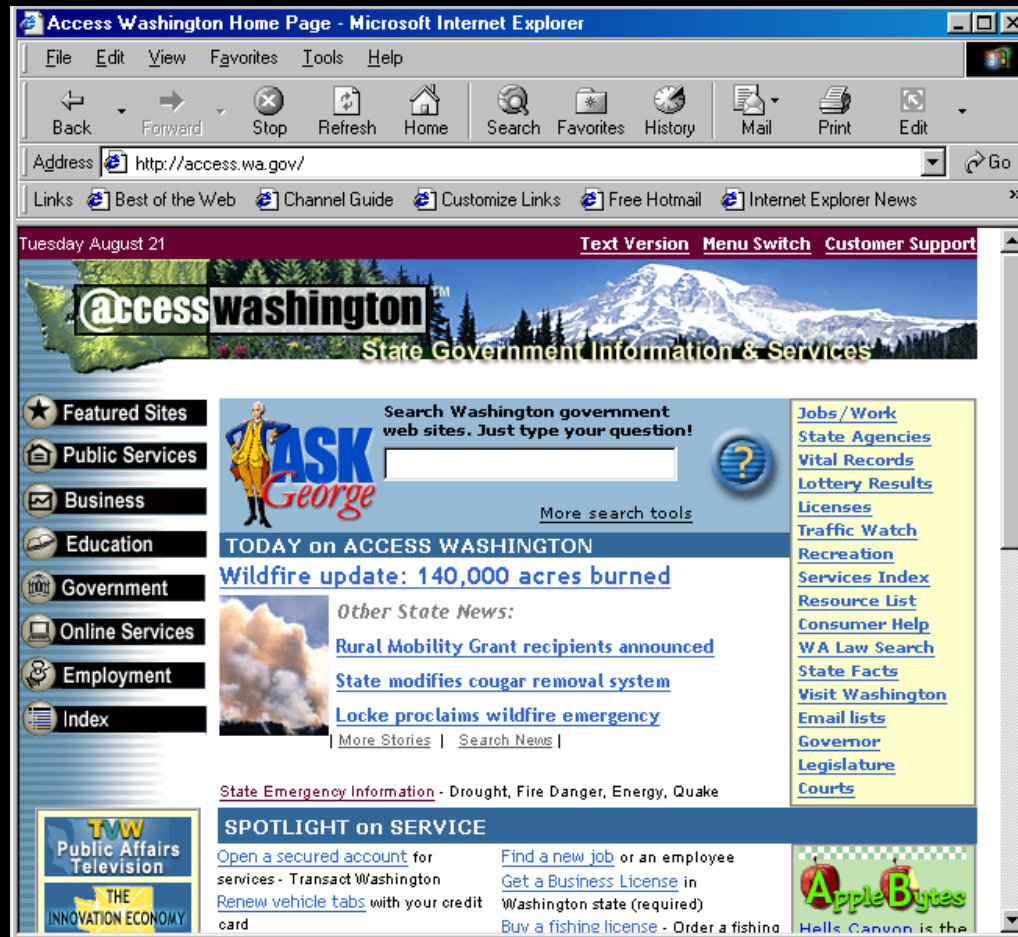


- **Buy a product: 52%**
- **Visit a government Web site: 51%**
- **Buy or make a reservation for travel: 38%**
- **Participate in an online auction: 15%**



Pew  
& Internet  
American Life

# Internet Use Statistics



May 2001

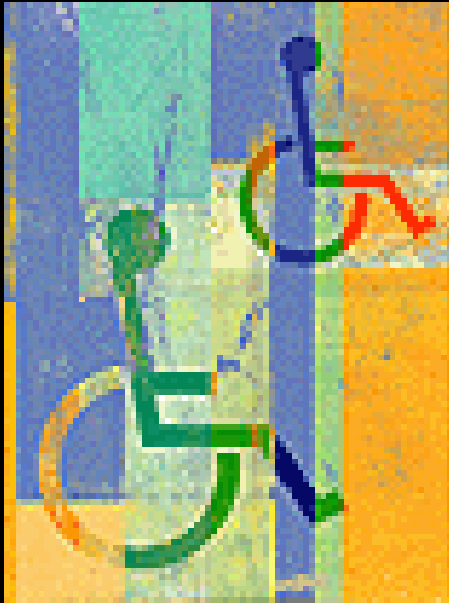
**543,000**

Average  
hits per  
day!

## Disability Facts:

- 1 in 5 Americans have some type of disability
- With aging population, likelihood is increasing



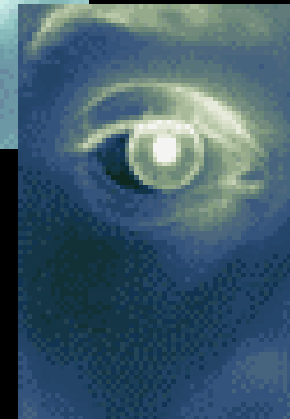
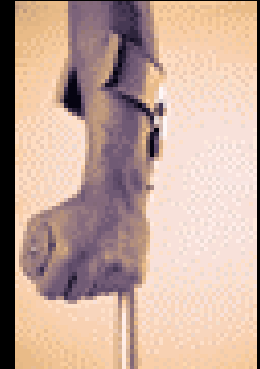


## **Accessibility Goals:**

- Improve employment opportunities, independence, and self-sufficiency for individuals
- Increase size of audience for agency, business program etc

# Types of Disabilities

- **Visual** - Blindness, low vision, color blindness, tunnel vision
- **Hearing** -Deafness, limited ability to recognize or distinguish sounds
- **Mobility**, may not be able to use a keyboard or mouse
- **Seizure** and disorders - Epilepsy
- **Cognitive** and language
- **Speech**



# Mobility

Not everyone uses  
**a mouse**





**When designing for accessibility...**



**Begin with the End in  
Mind**

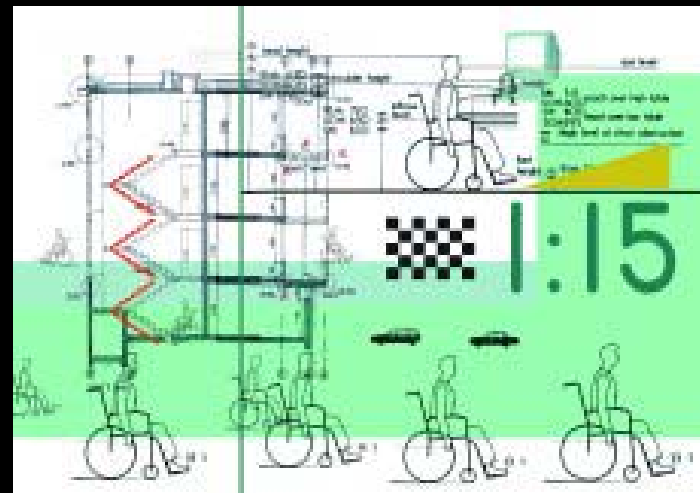
*Concept from Stephen Covey.*

# Design Principles

**Principle of Universal Design** - More cost effective to design at the blueprint level

## Universal Web Access

Provides individuals who use a variety of devices to access digital government services



*“Provides access for various types of devices”*

# Assistive Technology

## Low-Tech

- Like eyeglasses, wheelchairs

## High-Tech

- Screen Readers - JAWS, Window Eyes
- Braille displays
- Audio
- Touch pad, mouse, keyboard, trackball

**Screen Reader Demo**

# Standards and Guidelines

- W3C Checklist of Checkpoints for Web Content Accessibility Guidelines 1.0
- Section 508 Technical Standards
- Washington State Digital Government Web Presentation Guidelines

*“Broad applicability across jurisdictions”*

# W3C Checklist of Checkpoints for Web Content Accessibility Guidelines 1.0

## [Priority 1]

A Web content developer must satisfy this checkpoint.

## [Priority 2]

A Web content developer **should** satisfy this checkpoint.

## [Priority 3]

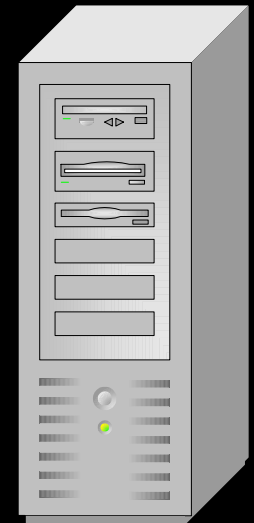
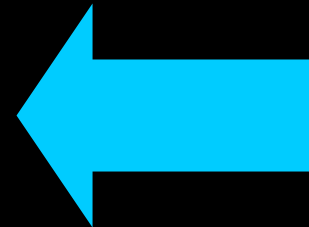
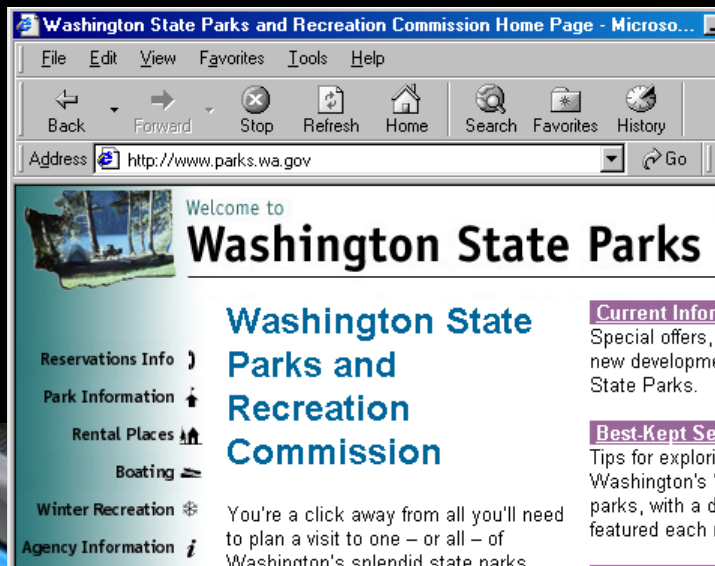
A Web content developer **may** address this checkpoint.

# Section 508 Summary of Technical Standards

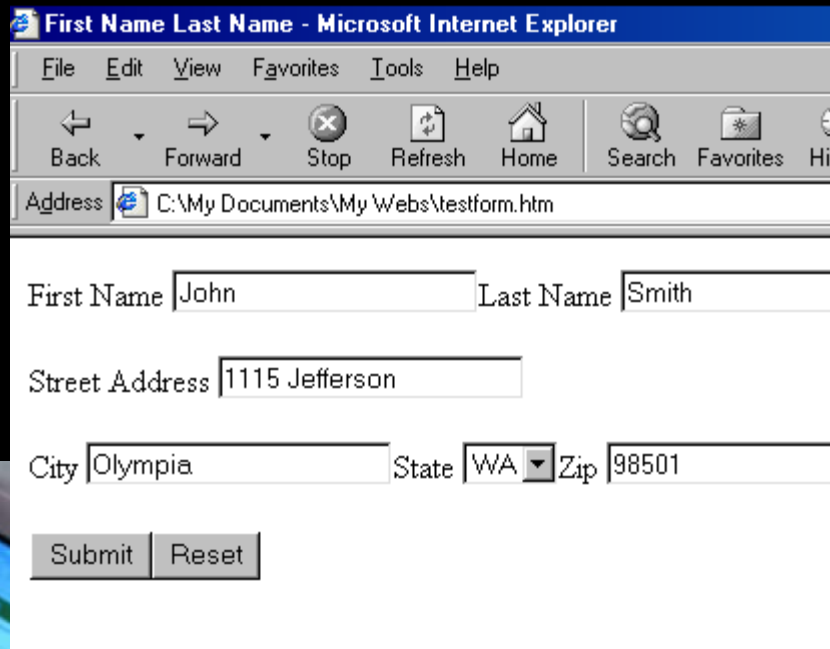
## § 1194.22 **Web-based intranet and internet information and applications**

- Software applications and operating systems
- Telecommunication products
- Video and multimedia products
- Self contained, closed products
- Desktop and portable computers

# Web-based intranet and internet information AKA, Web sites



# Web-based applications



First Name Last Name - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Hist

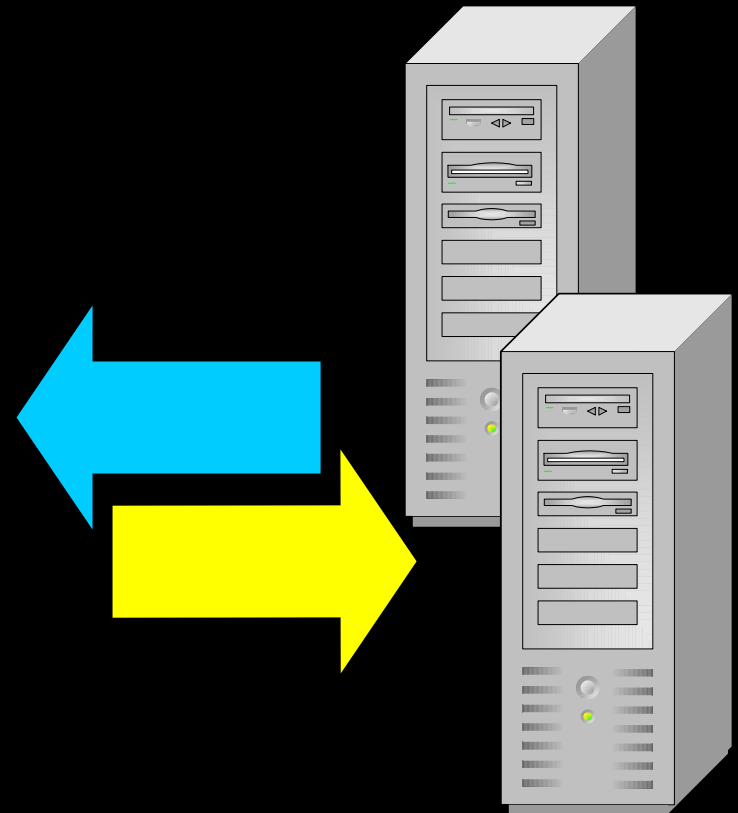
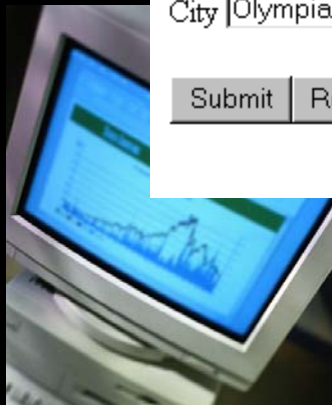
Address C:\My Documents\My Webs\testform.htm

First Name John Last Name Smith

Street Address 1115 Jefferson

City Olympia State WA Zip 98501

Submit Reset



**E-Business, e-forms, web-app, etc.**



## Section 508 and W3C - The “EZ” Chart

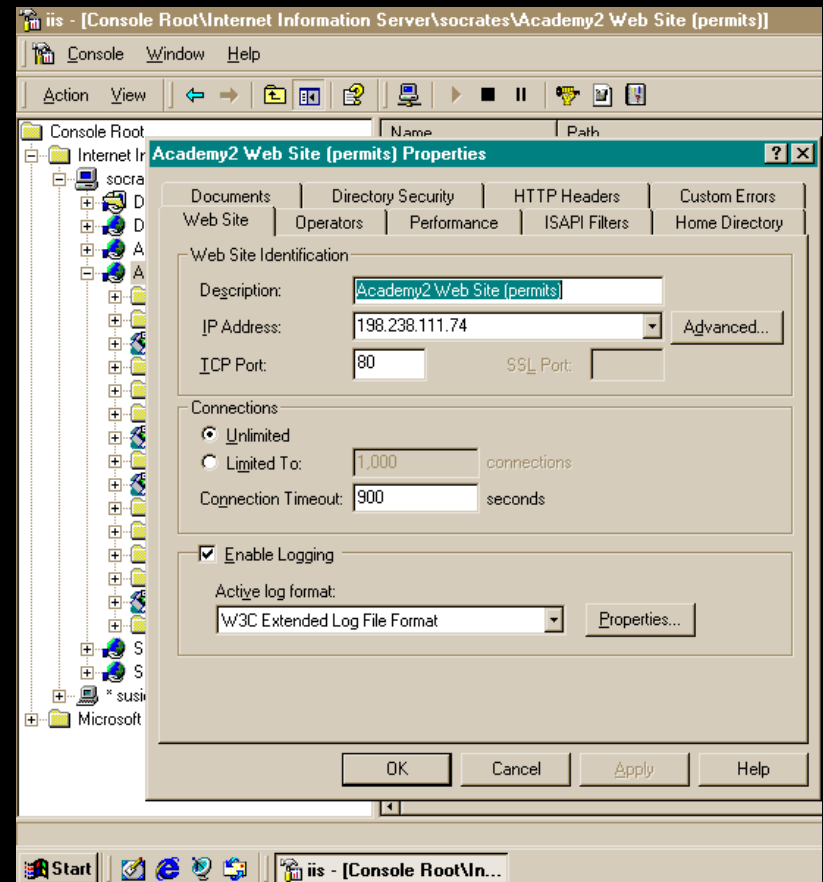
Item	Section 508	Comparison	W3C Priority	Checkpoint
Timed Responses	When required, alert user and give sufficient time.	<i>New</i>		
Flicker	Avoid frequencies >2 Hz and <55 Hz	Similar	1	7.1
Applets & Plug-ins	If used, page must provide link to accessible plug-in	Similar	1	6.3
Scripting	Include functional text	W3C more restrictive	1,2	6.3, 6.4, 8.1, 9.3
Forms	e-forms, directions, and cues	Similar	2	10.2, 12.4, 9.3
Skip Navigation	Permit users to skip repetitive links	508 more specific	3	13.5, 13.6

# #1 - Timed Responses

## HTML/Javascript

```
</head>  
<body onLoad="tID =  
setTimeout('executeTim  
er()',1080000)"  
onMouseMove="resetTi  
mer()"  
onKeyPress="resetTime  
r()"  
STYLE="background-  
image:  
url(../images/headerBG.  
gif);background-  
repeat:no-repeat;">
```

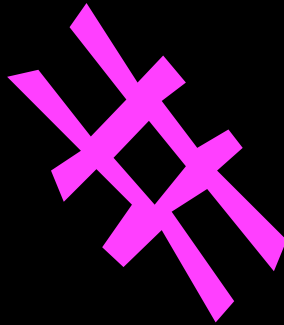
## Server Configuration



## #2 - Flicker

508 = Avoid  $>2$  Hz  $<55$  Hz

W3C = Avoid  $>4$  Hz  $<59$  Hz



“Fortunately, there's no easy way  
in HTML to produce flickering” -  
Idyll Mountain

# #3 - Applets and Plug-ins


## Client

Adobe Acrobat Reader - Download - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit

Address <http://www.adobe.com/products/acrobat/readstep2.html> Go Links >>

 Adobe Acrobat Reader 5 Download Adobe Acrobat Reader

Step 1

Select an Acrobat Reader version.

Language:

Platform:

Location nearest you:

☐ Include option for searching PDF files and accessibility support (longer download)

Macintosh: [.bin or .hgx?](#)

Step 2 (Optional)

If you would like more information from Adobe or our partners please check one or both of the boxes below.

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E-mail address:

Country:

Country (other):

Step 3

For personal use

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The version of Acrobat Reader you are downloading:

The download file size is:


## Web Developer

Make Accessible Plug-In - Acrobat for Windows - Downloads - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit

Address <http://www.adobe.com/support/downloads/88de.htm> Go Links >>

 Adobe everywhere you look™

Store Products Support Corporate Knowledgebase Training Forums Announcements Survey Search | Contact us

CustomerFirst Support Downloads

### Downloads

[DOWNLOAD](#) Make Accessible Plug-In

The MakeAccessible Plug-in creates a tagged Adobe PDF file from an untagged PDF file.

Characteristics of a tagged PDF:

- Page content is contained in a logical read order
- Word boundaries explicitly identified
- Font encodings mapped to standard font encoding
- Includes a structure tree comprised of a standard set of tags

Benefits of a tagged PDF:

- Can be read by a screen reader for greater accessibility
- Document reflow
- Can be saved as Rich Text Format (RTF).

Additional documentation:  
Refer to <http://access.adobe.com> for additional information about creating accessible Adobe PDF documents.

Product	Acrobat
Version	5.0
Platform	Windows
Filename	MakeAccessiblePlugIn.exe
Released On	04/13/2001
Filesize	1.8 MB

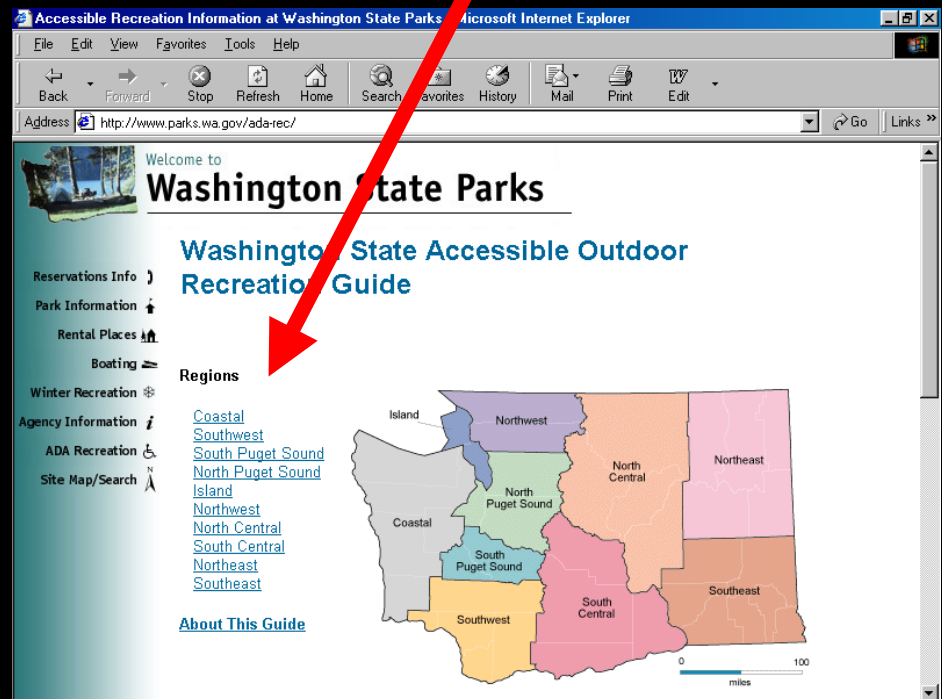
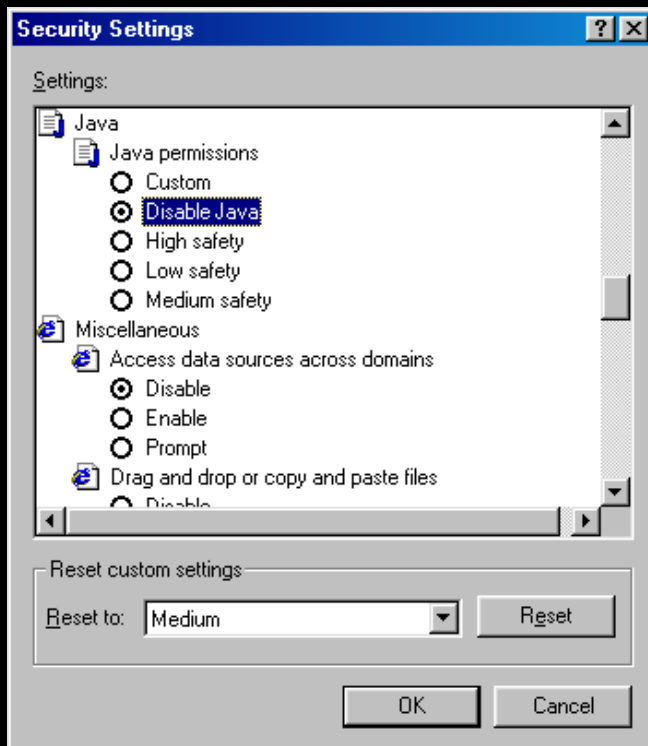
**Got Some Time to Take a Survey?**

[Tell us how we can improve our](#)

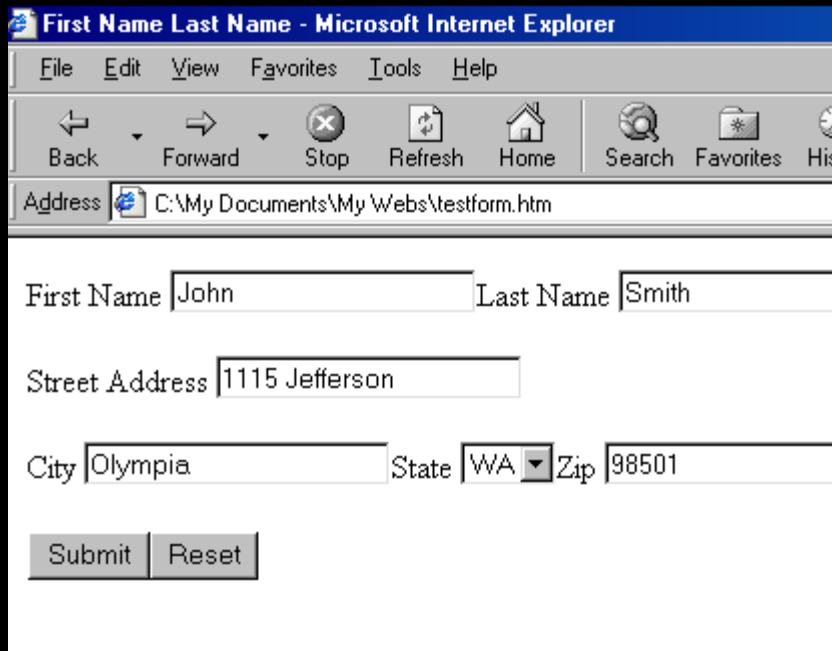
## #4 - Scripting

Assistive Technologies do not handle client-side scripts well

Redundant text links



# #5 - Forms



The screenshot shows a Microsoft Internet Explorer window with the title 'First Name Last Name - Microsoft Internet Explorer'. The address bar displays 'C:\My Documents\My Webs\testform.htm'. The form contains the following fields and controls:

- First Name:
- Last Name:
- Street Address:
- City:
- State:  (dropdown menu)
- Zip:
- Submit:
- Reset:

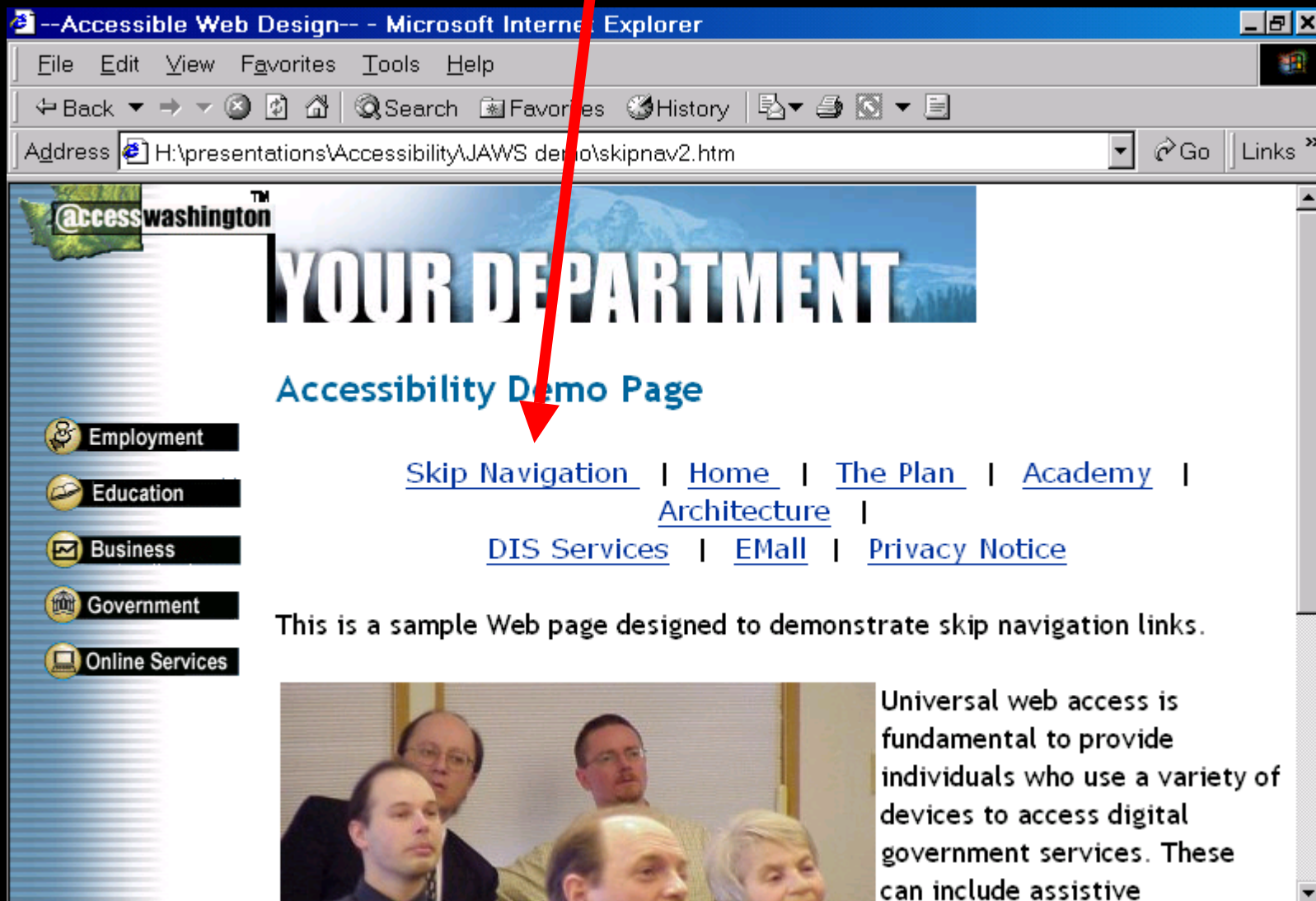
## Accessible HTML Form

Use the `<label>` tag

```
<label for="firstname">First  
Name:</label>
```

Use the `<tabindex>` attribute

## #6 - Skip Navigation




Microsoft Internet Explorer

File Edit View Favorites Tools Help






Back Forward Stop Home Search Favorites History Print

Address <H:\presentations\Accessibility\JAWS demo\skipnav2.htm> Go Links


 **YOUR DEPARTMENT**

**Accessibility Demo Page**

[Skip Navigation](#) | [Home](#) | [The Plan](#) | [Academy](#) |  
[Architecture](#) |  
[DIS Services](#) | [EMail](#) | [Privacy Notice](#)

 Employment  
 Education  
 Business  
 Government  
 Online Services

This is a sample Web page designed to demonstrate skip navigation links.

 Universal web access is fundamental to provide individuals who use a variety of devices to access digital government services. These can include assistive

# 508 “How to” Resources

## **Section 508 and W3C Guidelines A Side-by-side Comparison**

<http://www.JimThatcher.com>

## **Section 508 Web Accessibility Training**

<http://www.section508.gov/classes.html>



# Screen Readers

**Window Eyes**

**NanoPac, Inc.**  
*Technology for Independence since 1987*

**JAWS**



**IBM Home Page Reader**



# Accessibility Tools



Wave

SSB Technologies



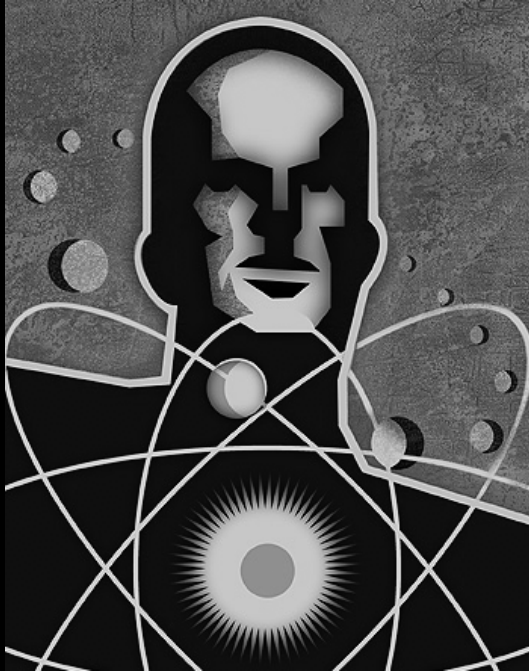
HTML Validator

Crunchy  
Technologies

Adobe PDF

Dreamweaver

*“Like a grammar checker”*



*The Washington State Applications Template and Outfitting Model <sup>TM</sup> (ATOM) is a comprehensive and detailed roadmap for the fast and efficient way to build digital government applications.*

<http://www.wa.gov/dis/e-gov/atom/>